

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance: the closest prior art, as discussed in the Office Action of November 19, 2007, includes Heiman (US 2580773), Eckles (US 5405523), Gundel et al (US 2892760), Hildering et al (US 3960677), Haydu et al (US 5182006) and Japan 2000-256864. These references provide the suggestion to use zinc immersion plating, a specific type of coating which operates by displacement reaction, to coat aluminum/aluminum alloy substrates with the bath containing zinc, nickel and/or cobalt ions, fluoride ions and a brightener that acts as an inhibitor (see the November 19, 2007 Office Action). However, the independent claims of the present case now require that the inhibitor is a mercapto substituted nitrogen-containing heterocyclic compound, a pH of the plating solution of about 4.5 to about 5.5 and that the zinc ions and the nickel and/or cobalt ions are provided with acetate as a counter ion. As discussed in the 37 CFR 1.132 declaration of N. Joshi of April 29, 2008, the Examiner understands that one of ordinary skill in the art would not have expected that a given brightener would be simply exchanged for another and would work in the specifically claimed immersion plating bath, and also that specific benefits not shown by the prior art are provided for the use of the narrow pH range claimed and the use of the zinc with acetate as a counter ion (i.e., zinc acetate as the source of zinc ions). As a result, the cited prior art does not teach or suggest the presently claimed immersion plating with the specific components and amounts.

The Examiner further notes the related patents to Joshi et al (the same inventors as in the present application), US 6790265 and US 6811819. There is no obviousness-type double patenting with the claims of these patents because neither set of claims provides for the use of fluoride, or the pH range and zinc ions with acetate as a counter ion as presently claimed (provided as being specifically beneficial, as discussed in the paragraph above), and US 6790265 also only provides for claims to a solution.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Katherine A. Bareford/
Primary Examiner, Art Unit 1792